REMARKS

Claims 1-16 remain in this application. Claims 1, 3, 6 and 12 have been amended. No new matter has been added.

In this Response, Applicant amends the claims without prejudice and addresses the Examiner's rejections. Support for the amendments to the claims can be found throughout the application. Amendments to the claims are being made solely to expedite prosecution and do not constitute an acquiescence to any of the Examiner's rejections. Applicant's silence with regard to the Examiner's rejections of the dependent claims constitutes a recognition by the Applicant that the rejections are moot based on Applicant's remarks relative to the independent claim from which the dependent claims depend.

I. Claim Rejections Under 35 U.S.C. § 102(e)

Claims 1-16[1] were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent Pub. No. 2003/0000455 to Voutsas (hereinafter "Voutsas"). Applicant respectfully traverses this rejection and further submits it is moot in view of the amendments to the claims.

II. Voutsas Does Not Disclose or Suggest All of the Features of Independent Claims 1 and 12

As amended independent claim 1 is directed to a "method for recrystallizing a semiconductor thin film to improve its crystalline quality, comprising:

> (a) irradiating a first region of a surface of the semiconductor thin film with a pulse of a radiation beam, wherein the radiation beam is first patterned into at least one beamlet in a pattern of beamlets, wherein each beamlet is incident on a target area in the first region, wherein each beamlet has sufficient fluence to melt semiconductor material in the target area on which it is incident, and wherein

[1] Applicant's attorney contacted the Examiner regarding the status of claim 2, which was not explicitly rejected in the body of the Office Action, and the Examiner indicated that claim 2 was inadvertently left out of the rejection.

the molten semiconductor material in the target area recrystallizes when it is no longer exposed to the incident beamlet; and

(b) continuously translating the semiconductor thin film relative to the radiation beam so that a second region of the surface of the semiconductor thin film is irradiated in the same manner as in (a), wherein the second region is geometrically separate from the first region."

Voutsas does not disclose or suggest at least the feature of irradiating "a second region of the surface of the semiconductor thin film [] in the same manner as in (a), wherein the second region is geometrically separate from the first region," as recited in amended claim 1. Rather, Voutsas is directed to a method for "maintaining planar surface as crystal grains are laterally grown in the fabrication of crystallized silicon films." (Voutsas, abstract.) Voutsas discloses a planarization method which utilizes a beam extender to produce two or more temporally separated beam pulses, with a range of 30 to 500 nanoseconds between each pulse. (*Id.* at ¶ 30; Figs. 6-8.) Voutsas then discloses irradiating areas, *e.g.*, **402**, **404** and **406**, with a first sequence of laser pulses produced with the beam extender. (*Id.* at ¶¶ 14, 29, 36, Fig. 4.) Voutsas further describes that a temporary ridge is formed in each of the irradiation areas **402**, **404**, etc., and that ridge is "reduced in size as a result of subsequent pulses in a sequence of pulses or subsequent irradiation shots." (*Id.* at ¶ 30; Fig. 4.) Accordingly, Voutsas is directed to a method wherein at least two successive beam pulses *completely* overlap each of areas **402**, etc.

At best Voutsas discloses a *fifty percent* overlap between irradiation areas, each area being irradiated by a plurality of beam pulses. As illustrated in Figure 4, areas **402**, **404** and **406** are overlapping by *half* of their respective widths, which correspond to the width of the beam. (*Id.* at ¶ 28; Fig. 4.) In other words, the substrate translates approximately half of the width of the laser beam between each sequence of pulses. It is clear, therefore, that Voutsas discloses a method employing substantial geometric overlap between beam pulses to achieve planarization of the thin film sample.

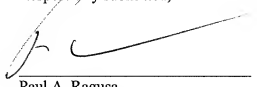
Voutsas does not disclose, or suggest, anywhere in the specification or figures the feature of irradiating "a second region of the surface of the semiconductor thin film [] in the same manner as in (a), wherein the second region *is geometrically separate from* the first region," as recited in claim 1 (emphasis supplied). Accordingly, Applicant respectfully submits that the rejection of independent claim 1 under 35 U.S.C. § 102(e) as allegedly anticipated by Voutsas should be withdrawn.

As amended independent claim 12 is directed to a "method for recrystallizing a semiconductor thin film to improve its crystalline quality, comprising," *inter alia*, features similar to those discussed above in relation to independent claim 1. For at least the above reasons, Applicant respectfully submits that the rejection of independent claim 12 under 35 U.S.C. § 102(e) as allegedly anticipated by Voutsas should be withdrawn. Claims 2-11 and 13-16 all depend from either claim 1 or 12, and are patentable over the cited art for at least the same reasons discussed above.

CONCLUSION

Applicant does not believe that any additional fee is required in connection with the submission of this document. However, should any fee be required, or if any overpayment has been made, the Commissioner is hereby authorized to charge any fees, or credit any overpayments made, to Deposit Account 02-4377.

Respectfully submitted,



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